November 19, 2003

REQUEST FOR STATEMENT OF QUALIFICATIONS

ARSENIC TREATMENT FACILITIES
ASSOCIATED PIPELINES

The City of Scottsdale is accepting written statements of qualifications for design of pipelines and booster stations to connect new arsenic treatment facilities and existing wells. These pipelines will focus on arsenic well clusters No. 4, No. 5 and No. 5A as shown on the attached project location map. Consultants may submit statements of qualifications for one or more of these projects.

ABBREVIATED SCOPE OF WORK

The City of Scottsdale's Water Resources Master Plan envisioned the following pipelines required to implement the City's arsenic treatment program. The engineer will be responsible to confirm the pipe sizes.

Clusters 4 and 5 (See Attachment 2) include a 30-inch potable waterline from Hayden and Jomax roads to Site 42 at the NWC of Pima and Jomax roads. Included in this pipeline design will be a 20-inch potable waterline in Miller Road from Cluster 5 at the NEC of Deer Valley and Miller roads to Happy Valley Road. A 24-inch line would be designed east to Hayden Road, then north to Jomax Road. At Well Site 54, the engineer will also be responsible for design of additional booster pump station capacity, piping for ASR, and equalization basin. This task will also include associated pipeline work between well sites 38, 106, and the arsenic treatment facility on the Alameda Road alignment.

Cluster 5A (See Attachment 3) includes a dedicated 16-inch arsenic line from well site 108 to future well site 140. A dedicated 24-inch arsenic line will continue along the power line corridor to the Scottsdale CAP water treatment plant. In addition to this waterline, a new 24-inch potable waterline is required from the Scottsdale CAP water treatment plant to well sites 140 and 54, also along the powerline corridor. Also included in this task is a connection from the future Center Drive alignment at Hayden Road to the

new arsenic pipeline in the power line corridor. The engineer will also be responsible for evaluating modifications to the existing CAP potable water booster pump station 55B.

PRE-SUBMITTAL CONFERENCE

A pre-submittal conference will be conducted at 10 AM on December 4, 2003 at Water Operations, 9312 N. 94th St. Limited space requires that no more than two persons per firm attend the conference.

INDEMIFICATION & INSURANCE REQUIREMENTS

The City of Scottsdale requires the selected team to execute an Engineering Services Contract. The basic format of this contract is available on our web site:

http://www.scottsdaleaz.gov/capitalprojects/PDF/eng10.pdf.

The City's Indemnification and Insurance language is included in this contract. Submission of your Statement of Qualifications shall indicate your firm's ability and agreement to sign Scottsdale's Standard Engineering Services Contract. Questions shall be addressed to Risk Management (480-312-2509) prior to submittal in writing.

For submitting firms, the City requires a statement in the submittal that the firm has read and understood all the elements laid out in the Engineering Services Contract.

SUBMITTAL REQUIREMENTS

Each Statement of Qualification must include a completed Standard Form (SF) 254 submitted with the firm's proposal. The Standard Form (SF) 254 is available on the City's web site: http://www.scottsdaleaz.gov/capitalprojects/rfq.asp.

Reply to this request with four (4) copies of your response. Limit your submittal to six (6) 8 1/2" x 11" pages, excluding resumes. Please number all pages and address the following items:

1. List the name of the firm, address, contact person and phone number.

2. Firm's Capabilities
   Describe recent pipeline design or related projects, which your project team has completed. Specifically detail your experience with items listed in the abbreviated scope of work and related possible regulatory concerns. List the members of your project team, their individual experience, current location, and the role to be played by each team member during the design process.

3. Project Issues
   Identify and discuss significant design issues, which you perceive will influence the formulation and implementation of this project.

4. Project Approach

Provide your approach to this project, based on the information presented in the abbreviated scope of work and at the pre-submittal conference. Include specifically how you would address the tasks identified in the abbreviated scope of work.

5. Project Schedule
Provide a project schedule summarizing the time to address each task involved in completing the pipeline designs. Assume that design will begin in February 2004, with construction completed by January 2006.

6. Local Knowledge
Identify your firm's familiarity with relevant City of Scottsdale procedures and requirements pertinent to this task, which enhances your qualifications to successfully design this project.

EVALUATION CRITERIA

Evaluation of the submittals will be based on the following:

*Firm's Capabilities (50%)
*Project Issues (20%)
*Project Approach (20%)
*Project Schedule (5 %)
*Local Knowledge (5%)

SELECTION PROCESS

Due to the necessity for concurrent design of these facilities, selection of one or more firms to commence contract negotiations will be made through an evaluation process based on the written statements of qualifications submitted and the above evaluation criteria. Oral interviews may be requested of certain firms following evaluation of submittals.

SUBMITTAL TIME AND PLACE

Responses to this request must be received at the City of Scottsdale's Water Resources Department no later than **4:00 PM on December 22, 2003**. .

Address responses to: Joseph E. Gross, P.E.
Water Resources Department
9388 East San Salvador
Scottsdale, AZ 85258
(480) 312-5628
Jgross@ScottsdaleAZ.gov

GENERAL INFORMATION

City Website. This Request for Qualifications will be posted on the City's website. The address is:

http://www.scottsdaleaz.gov/capitalprojects/RFQ.asp

City Rights. The City of Scottsdale reserves the right to reject any or all Statements of Qualifications, to waive any informality or irregularity in any Statement of Qualifications received, and to be the sole judge of the merits of the respective Statements of Qualifications received.

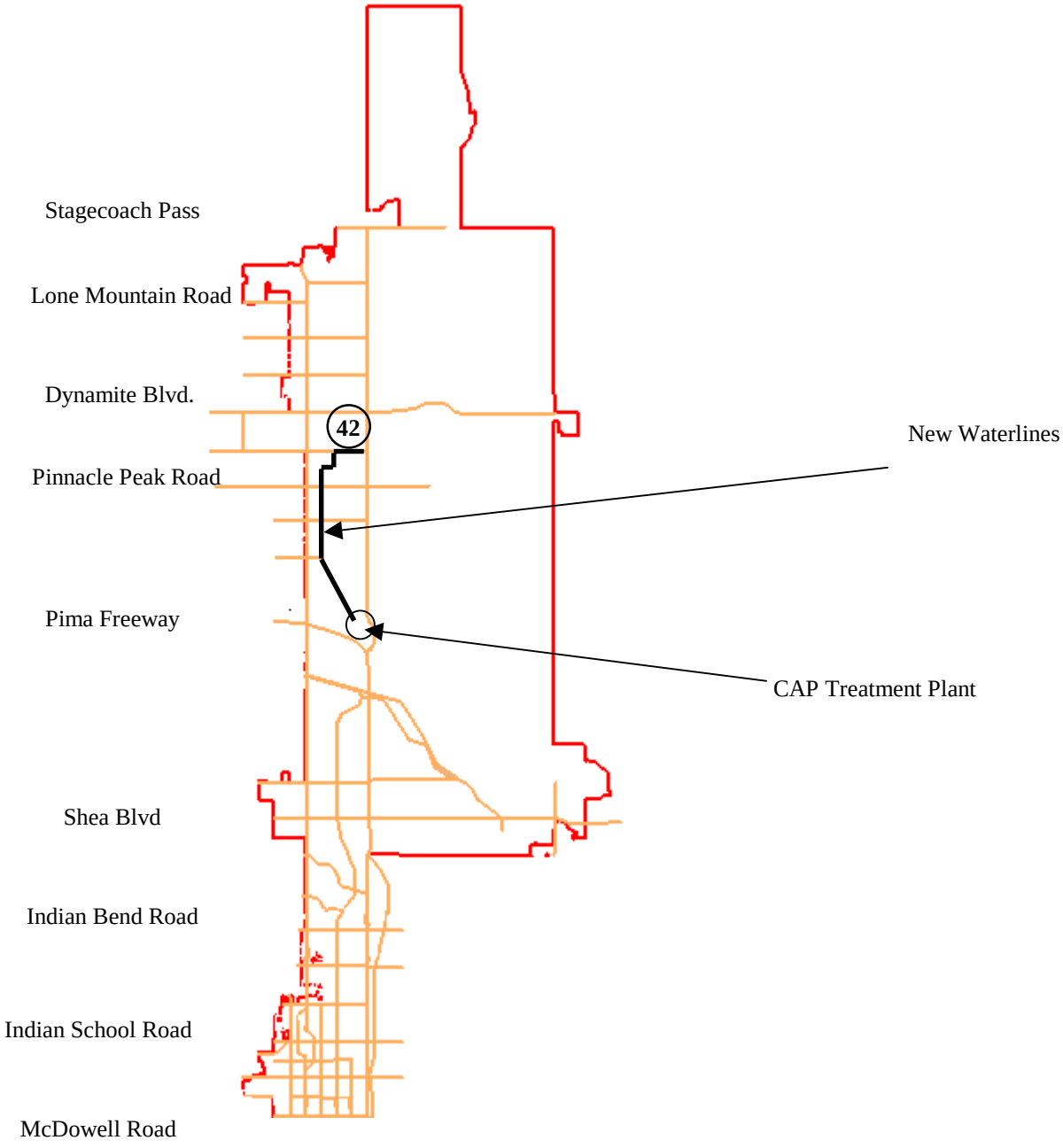
Release of Project Information. The City shall coordinate the release of all public information concerning the project, including selection announcements and contract awards. Firms desiring to release information to the public must receive prior written approval from the City.

Contact with City Employees. All firms interested in this project (including the firm's employees, representatives, agents, lobbyists, attorneys, and sub consultants) will refrain, under penalty of disqualification, from direct or indirect contact for the purpose of influencing the selection or creating bias in the selection process with any person who may play a part in the selection process, including the evaluation panel, the City Manager, Assistant City Manager, Deputy City Managers, Department Heads and other staff. This policy is intended to create a level playing field for all potential firms, assure that contract decisions are made in public and to protect the integrity of the selection process. All contact on this selection process should be addressed to the authorized representative identified above.

Attachments: 1) Map of Site Locations
2) Clusters 4 & 5 Pipelines
3) Cluster 5A Pipelines

ATTACHMENT 1

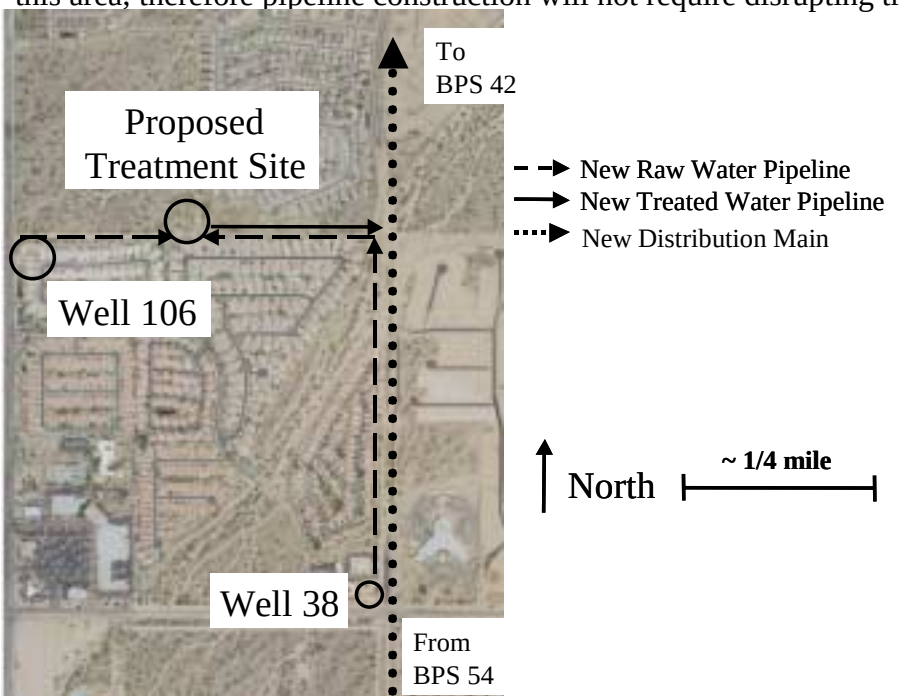
Arsenic Associated Waterlines



ATTACHMENT 2

Cluster 4 Pipelines

This project will require a total of 1 mile of dedicated untreated water pipelines from Well 38 and Well 106 to the selected treatment site as shown in Figure 1. The treatment site will be located along the southern border of the vacant land, pending discussions with the property owner. Locating at the southeast corner minimizes the length of the treated water pipeline required to connect the ATF with the proposed 20" pipeline along the Miller Road Alignment. Currently, Miller Road and Alameda Road are not developed in this area; therefore pipeline construction will not require disrupting traffic.



Cluster 5 consists of two wells that are approximately 1300 feet apart on Deer Valley Road between Scottsdale Road and Hayden Road as shown in Figure . The combined capacity of Wells 54 and 115 is 6.7 mgd, and the 90th percentile arsenic level is 13.4 µg/L as indicated in Table 1. Wells 115 and 54 are already connected via a dedicated pipeline that takes the water from Well 115 to the reservoir at Well 54. A booster pump station (BPS) at Well 54 is used to transmit the water into the distribution system.

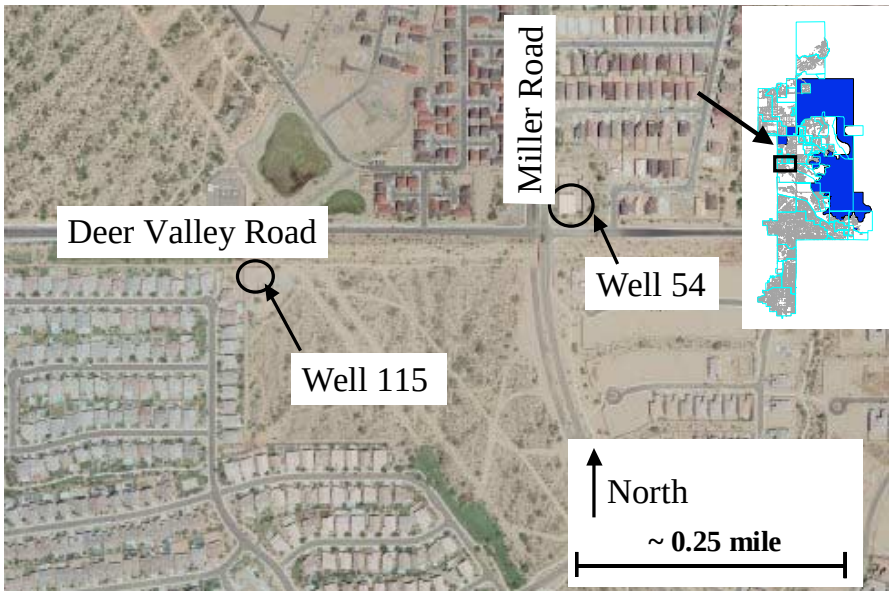


Figure 2. Location of Cluster 5 Wells

Table 1. Well Capacity and Arsenic Concentration for Cluster 5 Wells

	Well Capacity (mgd)	90th percentile Arsenic concentration (µg/L)
Well 54	3.3	14.3
Well 115	3.4	12.4
Total	**6.7**	**13.3** [1]

[1] Weighted average

This Project

Early in the planning stages for arsenic mitigation, it was decided that arsenic concentrations could be reduced to meet the City goal of 8 µg/L without construction of an arsenic treatment facility (ATF). Instead, aquifer storage and recovery (ASR) will be used to mitigate arsenic at Cluster 5.

Additionally, in the unlikely event of a CAP canal outage, a pipeline that will be used to bring treated surface water to Well 54 for ASR can be used in reverse-flow mode to deliver well water from Cluster 5 to the CAP WTP. In this mode of operation, water would go to the influent of the CAP WTP and be treated using the existing process train.

Preliminary Design Criteria

The ASR plan is to recharge approximately 3 mgd of treated CAP water for 5 months during the year. Then, during the peak use time in the summer, Well 54 can recover 3.3 mgd from the ground. During the winter months, when CAP water will be recharged, historical WTP water quality data indicate that the arsenic concentration will be below detectable limits (< 2 µg/L). The recovered water will then be blended with water from

Well 115 such that the blended concentration is less than 8 µg/L. The amount of water that can be used from Well 115 will depend on the arsenic concentration in the recovered water as well as the concentration in Well 115. Assuming the 90th percentile arsenic concentration in Well 115 (12.4 µg/L), if the arsenic concentration in the recovered water is 3.5 µg/L, the entire capacity of Well 115 can be used and still meet the arsenic goal. Since 2000, the arsenic concentration in Well 115 has decreased from 13 µg/L to approximately 11 µg/L. At the current lower arsenic concentration in Well 115, the recovered water arsenic concentration can be as high as 5 µg/L and still meet the target.

The largest component of treatment at this cluster is the pipeline to deliver treated CAP water to Cluster 5 (24-inch diameter). Also, an equalization basin will be needed for storing well start-up water as it drains to the sanitary sewer. The existing reservoir and chlorination system at Well 54 can be used for blending and disinfection, respectively. Because the BPS at Well 54 is already sized to handle the flow from both wells, and no additional water is being added to the cluster, the pump station does not need to be expanded.

There are also several distribution system modifications associated with arsenic mitigation at Cluster 5. Pipeline sizes must be validated by the Engineer.

- 20 inch diameter line along Miller Road between Deer Valley Road and Happy Valley Road
- 24 inch diameter line along Happy Valley Road between Miller Road and Hayden Road
- 24 inch diameter line along Hayden Road between Happy Valley Road and Jomax Road
- 30 inch diameter line along Jomax Road from Hayden Road to Pima Road (BPS 42)

Site Layout

The only new construction required at Well 54 is the equalization basin to used to hold well start-up water as it drains to the sanitary sewer. The approximate land area required for the basin is 600 ft^2 (assumes 20 ft depth, 10 feet below grade and 10 feet above). The area required can change depending on the depth of the basin. All facilities at this site need to be below grade such that the top of the structure is no more than 10 feet above grade. A potential location for the equalization basin for Cluster 5 is shown in Figure 3.

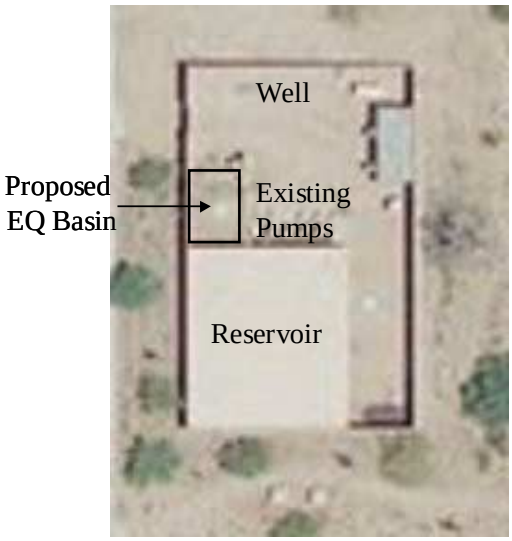


Figure 3. Site Layout for Cluster 5

The basin would share a wall with the reservoir and the site boundary. The City-owned parcel extends approximately 80 feet to the east and 120 feet to the north of this site. As such, it may be possible to expand the size of the site enclosure to accommodate the equalization basin. Alternatively, the equalization basin could be constructed below grade in the area to the north of Well 54 such that it is not visible from the surrounding residences. Either of these options may be preferable to disturbing the ground next to the reservoir.

ATTACHMENT 3

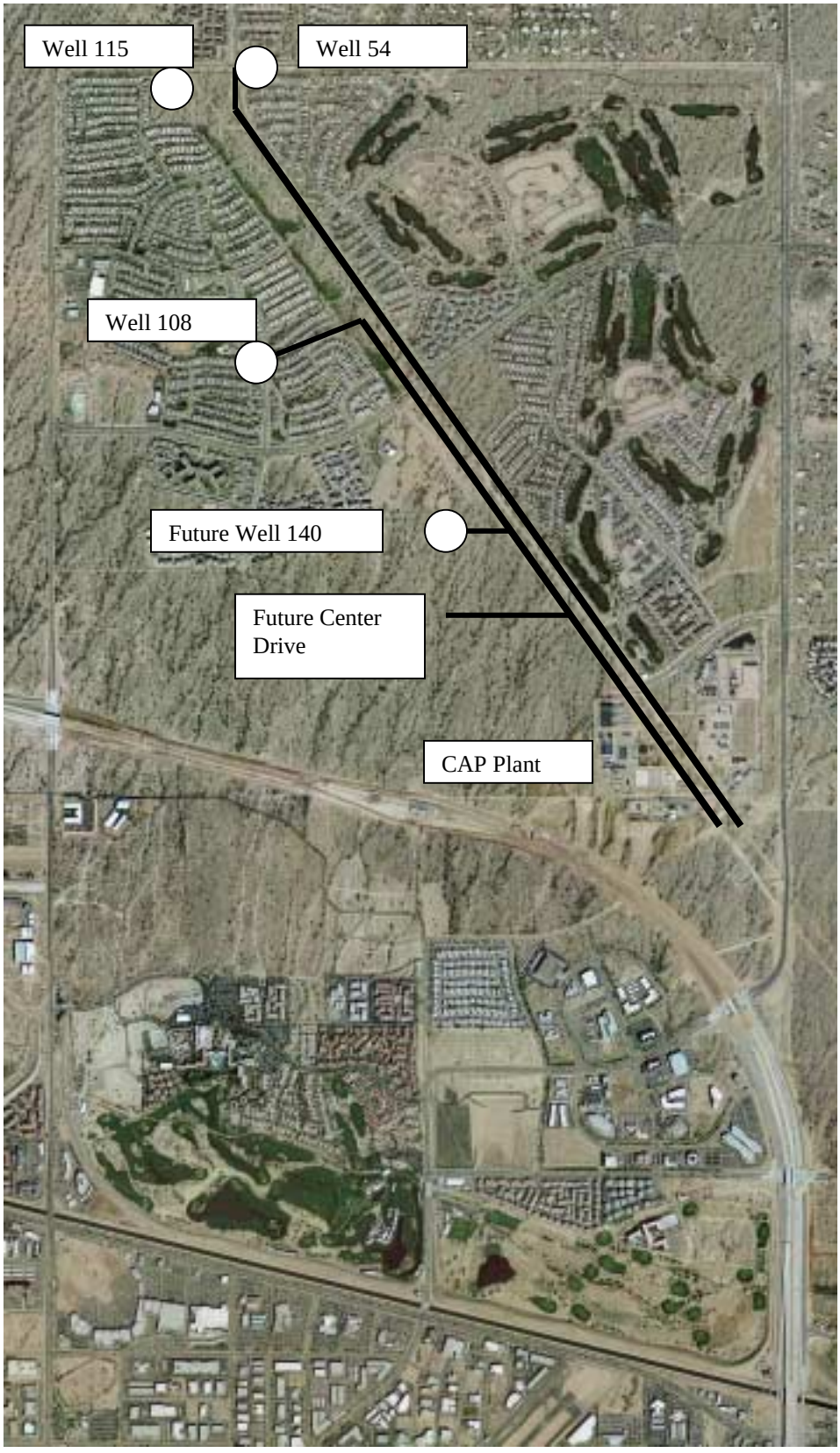


Figure 4